BULLETIN

VOL. 1 — SAN ANTONIO RADIO CLUB — NO.1

President--Ivan Mangold, WA5RNV
Vice President--Floyd Roland, W5JKU
Secretary--M. D. Harris, K5PKX
Treasurer--Frank Box. WA5VFM
Sgt. of Arms--
Les Eggleston, WA5GOQ

Meets first and thrid Fridays at 7:30 p.m. at Durhams Business College on Romana Plaza (Rear entrance.) All who have an INTEREST in amateur radio are cordially invited to attend.

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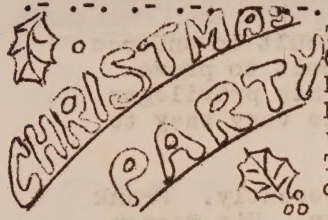

The San Antonio Radio Club will hold its annual Christmas party Friday, Dec. 5, at Stranges Party House, 1513 Banderq Road, Social Hour 6 to 7 p.m. Dancing, 8 to 12 p.m. with Lou Reams and his Orchestra. Setups will be furnished, so B.Y.O.B. The Tickets will cost $4 per person. These tickets can be bought from any of the following:

Ivan Mangold, WA5RNV, 826-6515
M. D. Harris, K5KPX, 655-0437
Dick McGuire, W5PXQ, 655-6918
Terry Turner, W5ETG, 434-1069
Lee Ulrey, K5HZR, 333-0060
George, W5VPQ, and
Ella, W5TSE, Munsch, 344-4191
Gene, W5EJT, and
Ruth. K5OPT, Jank, 342-2225
Aubrey Armstrong, K5MOF, 735-6770
Roy Albright, W5EYB, 822-7269
John Shean, W5LPO, 696-1879
Fred Henson, Modern Radio
Dean Davis, W5BGE, 735-1622
Johnny, W5LVE, and 344-5134
Frances, W5KQG, Breummer
Walt Dubose, K5YFW, 696-3196

Make your plans NOW for a gala Christmas get-together of your ham friends for an enjoyable evening of dining, dancing and "chit-chat". Tickets SHOULD be purchased by Nov. 30 to insure your reservation.

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PRESIDENT SEZ...

I would like to thank everyone for their confidence and trust accorded, by electing me, a newcomer to the the Ham Fraternity, your president. I hope I am able to guide the Club in the direction you would like for it to go. With your help, suggestions, and criticism, I may be able to do so. I need your help.

by W5RNV

As most of you know, I spend a great deal of time hunting and fishing during October, November, and December, so I will miss a few meetings during this time. With Floyd at the helm during this time, I'll not be missed.

The San Antonio Radio Club invites anyone interested in amateur radio, to attend our club meetings and join our club. We have scheduled several real interesting technical programs, as well as programs of general interest.

What can the Radio Club do for you? Nothing more than being a part of the greatest group of people in the world. What you can do for the Club is of prime importance. Your technical knowledge, assistance in Code and Theory Classes, helping the handicapped in setting up their stations, and your connections in knowing where to "grease" when the wheels need turning can be of great benefit. We need your help and membership.

73, Ivan WA5RNV

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OPERATING NEWS By K5HZR

There has been much hullabaloo recently about what is and what is not proper identification. For those amateurs who never read anything (especially the rules) this is covered in Subject D, Paragraph 97.87. Don't rely on what hearsay someone puts forth on the air. Read it yourself.

Just because the law isn't enforced too well is not valid reason to violate it. Once in a while someone gets caught and their normal reaction is that they are being persecuted. Now that the FCC monitors' ears are getting bigger and better we should all take stock of our operating habits and act accordingly.

On initial contact with a station, the transmitting station's call is all that is required, however at the end of the exchange of transmissi identification of both stations by each station is required. When reporting into a net you need not transmit the NCS's call, only your own. During a net session, if two stations are directed to communicate, identification must be made at the start and the end of the communication. At the end of the exchange of communication again identification of both by each station is required.

Another rule that is often violated but most difficult to enforce is 97.125 regarding interference. Since it is difficult to prove willful and malicious intent an amateur recently had his privileges suspended for 6 months for violation of 97.77 which is very easy to enforce.

We have had a turnover in Emergency Coordinators recently. Frank Gerwitz, W5QMH, has been appointed EC for Bexar County. His responsibilities include, among other duties, maintenance of our station at the Red Cross and the Weather Bureau. If you are not already an AREC member, now is the time to contact Frank for an application. He needs your support and active participation. 73's Lee Ulrey, K5HZR

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S.A. REPEATER ORGANIZATION by W5PSQ

The San Antonio Repeater Organization responsible for the present repeater, first met on Nov. 16 of last year. The organizations' intentions were to start a second repeater but we soon decided to relieve W5VPQ's one man operation.

All of us soon came to grip with two ingredients essential for any repeater--time and money. A repeater station especially the type we have--with transmitter and receiver at separate sites--is an unbelievably complex operation. (W5VPQ is said to have remarked while putting together his back yard setup, "This is wireless?")

To make the whole thing feasible at all, committees were formed for antennas, receiver site, transmitter site, site location, and acquisition (perhaps better known as scrounging). This is only a partial list and others committees had to be formed later.

Since repeater components don't grow on trees (even in Texas) dues had to be assessed. Also since there is a shortage of mountains around here we had to obtain permission to get on top of somebodies building. Thanks to bhe Bexar County Chapter of the American Red Cross with whom we are already closely allied we were able to get into the South Texas Medical Center. About the only other possibility appeared to be building a tower or renting space on one--again more money.

In June of this year came the first real results as the receiving equipment was installed on a 12-story building. Signals received on 146.34 MHZ were relayed via 450 MHZ to the transmitting equipment which was temporarily cluttering the property of first one member then another. Finally the transmitting equipment was installed in a nearby 7-story building. But the latter is becoming another 12-story building, meaning that equipment and antenna will have to be moved several times during the next few months.

In other words, there may be an operating repeater but that doesn't mean the fun is over. For one thing it has to be kept operating. You wouldn't believe how quickly tubes burn out when they are in constant service. Moreover, some of the equipment is old and should be retired to back-up service. Then there is talk of an automatic fone patch and of adding a six meter repeater.

To do this we need members, especially for those looking for something to do. And don't be bashful about your technical knowledge. One member seems to specialize in painting equipment racks--does a good job, too. And we can always use donations, especially of certain tubes. For example, we just replaced a pair of 6146's with donated ones.

All amateurs are invited to use our repeater station. Nobody is going to be cutoff for nonpayment of dues. (Rules violations are another story.) Furthermore, ALL AMATEURS are invited to join the San Antonio Repeater Organization. If you have any questions, feel free to drop us a line at P. O. Box 1753, or you may choose to call me either on the air or at 655-6918.

We meet at 2 p.m. on the Saturday following the San Antonio Radio Club meeting. The place is the Recreation Hall of Greentree Village, a mobile home court on Walzen Rd. just north of Interstate 35. The latest news about the organization may be heard at 7 p.m. every Wednesday on 146.94 MHZ. 73's Dick McGuire, W5PSQ

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CLUB STATION by K5MOF

A second club station has been established at the Jewish Community Center, 103 W. Rampart St., which is just south of the North Star Mall, down the street from Globe shopping center, between San Pedro Ave. and McCullough. The Center has built a room approximately 11 by 12 feet for the use of the Club.

It is located in a room at the rear of the Center. The Hy Gain Thunderbird TH6 6 element tri-band beam has been erected on a 30-foot tower. The station has been slow in getting off its feet due to several factors, such as completion of operating room, erecting tower, putting the beam in place, and getting the equipment lined up and working out a schedule. It appears now that most of the obstacles have been overcome and a period of regular operation will begin. The most effective use of the station will be on Sunday morning when there are approximately 50 to 100 Army and Air Force personnel present. Several Sunday morning operations have resulted in many patches home for some of the boys. They were most grateful. This is a planned weekly operation.

Operators will be needed for this operation as well as for others. At this point, one night during the week is also planned.

Shortly after the first of the year the Center will be the scene of a code and theory class for budding amateurs. This is shaping up and more publicity will be forthcoming.

Those helping in establishing this station include: Carl, WA5DQG; Frank, WA5VFM; Floyd, W5JKU; Jim, K5UKN; Terry, W5ETG; Larry, WA 5PAF; and others. 73's Aubrey Armstrong, K5MOF.

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VHF FREQUENCY MEASUREMENT by W5PEK

Without too much difficulty or construction, a frequency measuring device may be constructed and used by any amateur with the necessary components, provided the desired measuring range is restricted to small segments of the spectrum.

The primary requirement for any frequency measuring endeavor is posession of, or access to, a frequency meter of accurate calibration. The old BC-221 is entirely adequate and will provide VHF frequency measurements on the same order as the fundamental frequency range, in either 125-250 kc or 2-4 mc. This accuracy depends upon the care used in adjusting the instrument and calibrating the dial.

Let us take 2-meters as an example. Two meters is actually divided into two segments. The lower segment is used for satelite, net, long

range DX, and general communications. Satelite, EME, and other long range DX required accurate pre-setting of frequencies on the part of both stations, or at lease a knowledge of where these signals may be located. The second segment of 2-meters is being used by FM stations on fixed frequencies. This also required accurate adjustment of transmitters and receivers if the full benefits of the mode are to be recovered.

Measuring frequency in the order required is actually simple after a small amount of construction has been done. Let us assume it is desired to accurately measure the FM range. This requires an instrument with the capability of sweeping from 146 mc, up. To get this instrument, one combines several techniques. First, a crystal oscillator/ multiplyer unit must be constructed which will provide an output frequency of 144 mc. The output of the frequency meter and the 144 mc signal are then fed into a mixer and peaking circuit for output between 146-148 mc. It will be necessary to beat a transmitter frequency against the signal generator output to detect the frequency, but this may be done with either conventioal receiving equipment, or with a detector-amplifier.

Everything in the combined instrument is conventional and may be thought of as a VHF converter in reverse. It is only necessary to accurately determine the frequency of the mixing crystal and apply the appropriate corrective factors for a readout accurate to 200 cycles/

If the instrument is to be used in the lower segment of 2 meters, the fundamental frequency of the crystal oscillator should be either 11,833.33 or 7,888.88 mc. This will provide an output mixing frequency of 142 mc. If desired, this may be used for the entire 2 meter band by using the 4 to 8 mc range of the frequency meter above 146 mc and accept the x2 frequency readout error. 73's D. B. Olson, W5PEK

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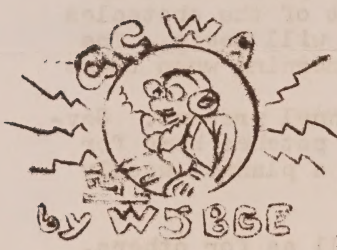

For those who had amateur liconso for 25 years or more there is a local chapter of QCWA. The Quarter Century Wireless Association is a national organization which was formed just before World War II, now has more than 6400 members. On week days on 14.280 MHZ at 10 a.m. You can check into a net of QCWA's with W2JE, Gus, acting as NCS. The local chapter has 25 members at the present time. Gene Jank, W5EJT, is president. The group meets quarterly on the 4th Thursday of the month. If interested in becoming a member of the local chapter please contact John Shean, W5LPO, at 0X6-1879.

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FM FLASHBACK

by W5VPQ

Elsewhere in this issue there should be an acticle by W5PSQ concerning the present status and activity of the S. A. Repeater Organization. Thus I will try to touch on some of the history and uses of amateur FM, without dwelling heavily on our local system. For many years, prior to 1960, it seemed that there should be a way for amateurs to have the type of communications that commercial two-way users took for granted; local, reliable contact up to as much as 50 miles to a mobile unit. As any of you who have operated HF mobile know, it is not always possible to find a usable frequency, and a station where you want to talk to, all at the same time. It was largely from this need that the development of amateur VHF-FM systems arose. These started in the mid-west, with the east and west coasts following shortly thereafter.

Here in San Antonio there was some 6 meter FM activity in the late 50's with the early 60's showing the greatest increase in amateur VHF-FM. This was helped by the availability of equipment, which, although small, had at least increased above zero. At this same time, activity started in other major metropolitan areas of Texas and Oklahoma, with cities in New Mexico, Arkansas, and Louisiana now also having activity. Happily most of these areas recognized the frequencies proposed as national standards, 146.34 to 146.94 for repeater use, thereby insuring the usability of the FM equipment used by amateurs

which has a limited number of channels.

The usefulness of FM for emergency work has been proven numerous times in San Antonio, an experience which is not uncommon around the country. There is both a six and two meter base stations permanently installed at the Red Cross Chapter House and antennas are being installed at the Weathor Bureau for future emergency use. The local 2-meter repeater has graduated from a one-man back yard operation to a well organized club system and welcomes new members who want to join in the fun.

This includes some of the non-emergency uses of FM, such as providing course communications for sport car races, and having a local channel to use on the way to work in the morning or home in the afternoon. The availability and enjoyment by making it possible to "keep in touch" with a minimum of equipment at a convention, ham-fest, or other activity.

VHF-FM is presently the fastest growing phase of amateur radio, generating a magazine devoted to the subject, as well as articles in all the other ham magazines and spawning new equipment designed especially for amateurs and causing the formation of an ARRL advisory committee to try and ease the growing pains. 73's. George Munsch, W5VPQ

(Editor's Note: W5VPQ is a member of the ARRL FM Advisory Committee and has fathered the FM activity for this area, also instrumental in the organization of the Texas VHF-FM Society.)

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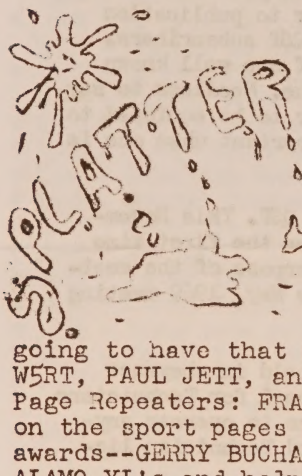

It appears that AUBREY, K5MOF, has deserted AM, (What's that?) and 40 meters as he has traded in his Valiant for a new rig (Galaxy). He has been working 20 meters and has gone to working for awards, also county hunting, about 14.372-36 Mhz.--Others heard lately on 20 are JIM, K5UKN, LARRY, WA5PAF and HOWARD, WA 5ZDF.--ELLA, W5TSE, just this last week when GEORGE, W5VPQ, was out of town, turned on the "low" freq. rig ALL BY HERSELF and talked to him.--K5IEG, LEONARD, says his place at Canyon Lake is about 80% complete. (When are we going to have that open house?)--Seen at the Guy Lombardo performance, W5RT, PAUL JETT, and W5MLQ, KEN MAXIM, reminising (?) together.--Sport Page Repeaters: FRANCES, W5KQG, and JOHNNY, W5LVE frequently appearing on the sport pages because their well-trained dogs win them so many awards--GERRY BUCHANAN, K5YCE, on page one of the Light, plugging the ALAMO YL's and helping Girl Scouts learn about ham radio.--At the radio club meetings, BRENDA AND LINDA, twin daughters of ALBERT, WA5IBD, and MIRIAM, present a panoramic spectrum of interest in boys, football, fingernails, sewing, sketching, and collection of stamps and postcards. --RUTH, K5OPT, at the recent Starving Artist Show had to run helter-skelter for shelter due to percipitation,with all her art gear.--OLE and BOBBY, K5AUW, with a new addition to the family, a boy, Ray Anthony, born Oct. 26.--"CAUTION" A recent accident should remind us of the dangers of RF, WALT, K5YFW, recently received a severe RF burn from his transisterized grid dip meter resulting in severe "brain" damage.--FLOYD, W5JKU, our new vice president, is the head of the Physics Department at San Antonio College, if you are interested in what SAC has to offer you in electronics, check with him.--LEE, K5HZR, and EMMA became proud grandparents again Thursday, Nov. 6 with arrival of 6 lb. 14 oz. grandson. The grandparents are doing very nicely.--GEORGE, W5VPQ, went to CanAm car races at Bryan Nov. 8-9.--On 7205, Saturday mornings at 8, you can find many ex-S.A. hams in QSO with GENE, W5EJT, and JOHNNY, W5LVE. They include, LINN, W5GR, - exW5LGG, Amarillo; JIM, W5LDV, Belton; and MONTY, W5JKC, Houston.--IVAN, WA5RNV,club president, overwhelmed at the great number of members who volunteer their services for club projects in the survey held at the Nov. 7 club meeting.--(EDITORS NOTE: Future issues of this bulletin are nebulous. So if it is to be continued--constructive criticism and LOTS of help will be needed.--LEAN, W5BGE.)--KEN KEELER, K2EIU/5 has gone to work for TWA. Now in Kansas City and will soon be based in San Francisco. He has been a real TEX stalward for over two years, serving regularly in NCS, RN5, and TTN liaison slots. Holder of ORS and OPS, KEN is a nationally known CD Party leader, to say nothing of other contests.

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WEST GULF DIVISION, AMERICAN RADIO RELAY LEAGUE NOV. '69

While attending the recent ARRL Board of Directors meeting in Newington, Conn., your Director was conducted on a tour of the office and facilities by Lewis G. McCoy, W1ICP. As you recall, Lew is Beginner and Novice editor of QST. The enormous stacks of contest reports and QSL cards observed being processed certainly explains why we have to wait several months to get results of contests published in QST.

The dedication to their job by all 72 employees and the obviously excellent manner in which our Headquarters is operated gives one adequate reason to be proud of our League.

It was a real pleasure to meet and renew acquaintance with all the gang, including John Huntoon, Dick Baldwin, George Hart, Laird Campbell, George Grammer, Doug DeMaw, Ed Handy, Ed Tilton, Bob Rinaldi, Perry Williams and others. Unfortunately, time did not permit a visit to W1AW.

Of course our two Texas stalwarts, Vice Presidents Soupy Groves and Doc Best were very much in evidence and active in the meetings.

The museum of amateur radio, in the headquarters building, with its artifacts of amateur radio from the beginning of the art to the present day, is worth travelling miles to see. Numerous amateurs were observed visiting the museum while I was in Newington.

The League laboratory is well equipped to fabricate gear being developed by the Technical section. The modern test equipment available permits running performance tests in order to check advertising claims prior to publication in the magazine. This is a valuable protective service for QST subscribers. It can also be a boon to the advertiser. Mention was made of one well known linear amplifier which exceeded all specifications except one. Needless to say, no other U.S. amateur radio magazine is known to this writer to be equipped to perform this service for its readers. This protection is important when one is considering the purchase of an expensive piece of gear.

Details of the Board meeting will appear in February '70 QST. This November meeting is precedent setting in that it is believed to be the first time two Board meetings have been held in one year. Primarily, purpose of the meeting was to follow up on actions directed by the Board at the May, 1969 meeting in New Orleans.

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One area in which action directed by the Board had been held in abeyance were items 14, 53, and 55 of the May meeting (Item 14: Proposal for Technicians to operate on 10 meters; Item 53: Permission for Technicians to operate anywhere in the 2m band; Item 55: Permission to hold Novice and Technician licenses simultaneously).

A letter just received, dated 5 November, from our Washington Legal Counsel, Bob Booth, W3PS, states he intends to prepare the appropriate petition to FCC on these items in the very near future. Just what reaction we will get from FCC on the petition remains to be seen. At last report, FCC still holds to the original concept that Technicians are technicians, not communicators. Watch QST for develppments on this and when the FCC calls for comments send in your opinions to FCC at that time.

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The Board authorized holding the 1970 National ARRL Convention in Boston, Mass., on 25 - 27 September, and the 1971 Convention to be held in Long Beach, California, aboard the QUEEN MARY.

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Difficulties regarding preparation of the new introductory booklet for the 12 - 16 year old age group, and the course of instruction on amateur radio for use in High Schools and Adult Education classes were resolved in conference between the Membership and Publications Committee (of which I am a member) and the General Manager. Mr. Huntoon promised the committee a draft of the proposed booklet prior to 31 December, and stated he is now prepared to begin work on the High School course.

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The proposal by Mr. Griggs to offer technical aid and cooperation to consumer oriented rating magazines in determining interference rejection characteristics of TV receivers and related home entertainment equipments was rejected after a tie vote, because the cost and time required in such a project could not be determined at this time.

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Subsequent to submission of the VHF-FM Advisory Committee report to the Board in May, the committee decided to present a somewhat modified proposal, with dissenting comment by one member of the committee. These interim proposals were discussed at length by several members of the Board. The Liaison Director to the Committee (Griggs, Southwestern Division) agreed we should ask the committee to formulate and present a formal report, together with a formal minority relort if such is desired by members of the committee. We hope this report will be forthcoming very shortly. This Director then initiated Board action which will result in publication of the formal report in QST, with a request for comments from the field. It is believed this will give every VHF-FM Repeater enthusiast an opportunity to comment and will provide unified majority thinking on the VHF-FM Repeater proposals to be presented to the FCC. As you know, FCC has had the Buffalo petition since 1967. We hope our comments and recommendations for regulatory changes are ready before FCC requests comment on the Buffalo petition. I shall attempt to keep you informed. In the meantime if you are not familiar with the Buffalo petition please get a copy and study it.

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SEE FEBRUARY '70 QST FOR OTHER BOARD ACTIONS

Brief reference to rule making petitions on Amateur Radio now pending before FCC follow. Watch for announcement in QST requesting comment, by the FCC, and if interested file your comments with FCC. I have copies of the petitions marked with asterisk (*). Name or call of the petitioner is in parenthesis.

RM	BRIEF MATTER INCLUDED
388	- Amateur Mobile Relay Stations (K5JKX et al).
* 968	- To provide freqs in other than 220 mc band for remote control (Speer, Calif).
1016	- Changes in VHF bands (WA2SAY).
* 1087	- To specifically auth Relay Station operation on VHF (W5GQJ).
1116	- Clarify RACES rules (Charles P. Samson).
* 1209	- Buffalo petition.
* 1306	- Change Extra Class and Novice segments (K2 UTC).
* 1346	- Establish Senior Citizens license on 2 meters (K3MGO).
* 1349	- Special frequency privileges for KP4. (Radio Club de Puerto Rico.).
* 1363	- Establish Advanced Technician Class license (K2ZRO).
* 1364	- RTY speeds of 60, 75, 100 wpm (W8SDZ).
* 1429	- Permit facsimile on 2 meters (WA8DCS).
* 1454	- Permit Technician Class CW in HF bands (K1KTB).
* 1455	- Issue same suffix, when avail, upon move from one call area to another (W2NSD).
* 1456	- Permit Tech CW in Novice HF subbands (W2NSD).
* 1477	- (1) Permit SSB for international contacts only in certain portions. (2) Give exam credit for commercial licenses (W2CNQ).
* 1478	- Authorize AF shift RTTY on 2 meters and 220Mc (W6PQH).
* 1479	- Change frequency allocations for various classes of licensees (W3JM).
* 1512	- Authorize OUTPUT power of 800 watts above 400 Mc. (W5JGV).
1516	- Permit Technicians to operate CW on 15 meters (WA6FNR).
1520	- Restrict certain segments of 6 meters for Extra and Advanced (W3KMV).
1521	- Permit Technician operation w/ Novice privileges in HF bands (K1RKL).
1522	- Delete 20 WPM from Amateur Extra Class requirements (W2EHB).

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During late September your Director performed the required annual visit and inspection of the K5, W5, etc., QSL Bureau, operated by Hurley (and Mary) Saxon, K5QVH, in El Paso. Hurley has an excellent system in operation. Although he handles an average of 30,000 QSL cards per month his back log is only about 1000 cards.

Incidentally, Hurley pointed out that because of the system he uses, your QSL's will be expedited if you will keep SIX (6) stamped envelopes at the Bureau instead of just one. In other words, send him six at first, then one each time you receive one from him with cards in it.

The new ARRL film, "Ham's Wide World" is available for showing, at no cost, on your local TV station; if they are interested contact your Director. Please advise if the station is equipped for video taping the film. This expedites moving the film to the next location. Record of showings, station call, location and date of showing must be furnished the Director for ARRL records.

Place and date for the 1970 West Gulf Division ARRL Convention is still undecided. if interested please get in touch with me soon.

73,

ROY L. ALBRIGHT W5EYB
DIRECTOR, WEST GULF DIVISION, ARRL

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